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**TWO CASES OF LITHOTOMY IN YOUNG PERSONS, WITH REMARKS
UPON OPERATIONS FOR STONE IN THE BLADDER.**

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[Reported to the Boston Society for Medical Improvement, April, 1863, and communicated for the Boston Medical and Surgical Journal.]

THE first of these cases illustrates the ordinary bi-lateral operation of Dupuytren, and may serve to compare this method with that adopted in the second case, where the primary incisions were novel, but the final ones identical with those of Dupuytren.

CASE I.—Thomas Curly, 12 years old, had been troubled for two or three years with a want of power to retain his urine, which until very lately had been attended by excessive suffering both by day and night. His condition was very miserable, and he was much emaciated; his sufferings, however, had been mitigated during the last few weeks, a fact which was afterwards explained by finding the stone fixed in the upper part of the bladder. The prepuce was very long, owing to the habit of constantly pulling at it. On sounding him, under ether, the stone was felt in the upper part of the bladder, where it appeared to be attached to the wall of the organ, and seemed partially buried in the folds of mucous membrane. It was decided to perform lithotomy, which was done by the bi-lateral method of Dupuytren. A sound of good size was introduced, making a great curve outward, so as to project well in the perinæum. A semilunar incision was then made above the anus, and the staff reached at the membranous portion of the urethra. Dupuytren's double lithotome was now passed into the bladder, with its concavity upwards, and the sound being removed, the instrument was reversed, its blades opened to the extent of seven eighths of an inch, and withdrawn. The forceps were now introduced, the finger having previously been used to explore the stone, which was found firmly adherent to the upper part of the bladder. The stone was seized with some difficulty, owing to the firm adhesions which it had contracted with the folds of the mucous membrane, but it was finally ex-

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tracted without injury to the organ. It proved to be a mulberry calculus, very rough and irregular in outline, and weighing about three drachms. A bit of elastic catheter was kept in the wound for twenty-four hours, after which it was dispensed with. On the third day a little water was passed by the urethra, and on the tenth day it had entirely resumed its natural channel. All the distressing symptoms of stone were immediately relieved by the operation, and at the end of three weeks the patient was discharged well.

CASE II.—Jacob Banks, 13 years old, from Amesbury, Mass., entered the Hospital in March, 1863, on account of great suffering in the region of the bladder, accompanied by incontinence of urine. Two years before, he noticed an occasional difficulty in passing water; at times a sudden stoppage of the stream occurred, and the urine was now and then a little bloody. Of late the symptoms had become more urgent, and the pain constant, so as to confine him to his bed. At this time the urine dribbled away, and the skin of the penis, scrotum and thighs had become red and irritated by it. The prepuce, as in the last case, was much elongated.

On introducing a sound, the instrument encountered much resistance at the neck of the bladder, and at once came in contact with a stone. The bladder was quite empty of urine, and the calculus meeting the sound at different points, while enveloped in the mucous folds, gave the impression of the existence of two or more stones.

It was decided to perform lithotomy, first relieving the external irritation by cleanliness and suitable dressings, and then evacuating the bowels by a dose of castor oil, followed by an enema, on the morning fixed for the operation.

The operation which was performed combined some of the more important features both of the median and bi-lateral methods, and seems to offer some advantages over either. A sound of medium size was passed into the bladder, the meatus urinarius, which had become very much contracted, being first slightly enlarged by the knife. The skin was then divided in the median raphé, and the dissection continued in the same line until the membranous part of the urethra was exposed. This was next opened, and the attempt made to introduce the double "lithotome caché" of Dupuytren. Owing to the unyielding condition of the neck of the bladder, the lithotome could not readily be passed in; a probe-pointed bistoury was therefore substituted for it, and the prostate divided on both sides. The finger now entered with ease, and a large stone was felt very high up in the bladder. Attempts were made to extract it with a long pair of polypus forceps, and then with the ordinary lithotomy forceps, but without success, owing to the great size of the stone; the cut in the prostate was therefore enlarged, and the attempts at extraction renewed, but still unsuccessfully. As it was not deemed safe to enlarge the incision in the prostate further with the knife, the two forefingers were introduced, back to back, and the

substance of the gland slightly torn. A larger pair of forceps was then passed in, and by embracing the whole stone within its jaws it was extracted without further difficulty. A bit of catheter was placed in the wound, and the patient sent back to bed.

On the ninth day the urine began to pass through the urethra, and from the twelfth day none escaped by the wound. At the end of three weeks the patient was discharged, with the external wound nearly healed, and free from all symptoms of stone.

The calculus, which appeared to be composed of the triple phosphate of magnesia and ammonia, was large and very rough; it measured $3\frac{1}{2}$ inches in its longest circumference, and $2\frac{3}{4}$ in the shortest; its weight was half an ounce.

Dr. W. said that he was led to perform the operation in the manner related, viz., by making an incision through the skin in the median raphé, instead of the cross cut, employed by Dupuytren, as illustrated in the first case, from having observed how easily these parts could be dilated in the incisions practised in perineal section for the division of strictures, in some cases impassable by the smallest sound. In these cases, after cutting through a deep perinæum filled with inflammatory exudation, it is often found necessary to exercise much patience and to spend much time in tracing the urethra beyond the stricture. Having had occasion, during the past few years, to do a number of these operations, most of them entirely without any guide, he was led to the reflection that it would be very easy in this way to perform the operation of lithotomy when the operator is guided by the presence of a large staff in the urethra. When the operation by this median section is performed deliberately, the operator has the parts divided freely open to the view, which is not the case in Dupuytren's operation, which has to be performed mainly by the sense of touch. By this method, also, the vessels are much less likely to be wounded than in the common operation. Although different kinds of operations must of necessity be practised to suit different cases, the present method would seem to be the most direct and natural one for arriving at the bladder. Since performing it, Dr. W. said he had found that a similar operation had been suggested by Mr. Erichsen, who had not, however, performed it upon the living subject. Mr. Allarton's and Mr. Beaumont's operations, although done in the median line, are essentially different.

Dr. W. stated that he had now operated upon about thirty cases of stone in the bladder, and thus far had been so fortunate as not to lose a single patient. Most of the operations had been done by the crushing method, which he had found applicable to all cases except in very young persons; the oxalate of lime, or "mulberry calculus," when in an adult patient, and of a moderate size, not being an objection on account of its hardness. In young subjects, on account of the small size of the urethra, the danger of its obstruction by fragments, and the comparative safety of lithotomy, he had gene-

rally performed lithotomy by the bi-lateral section, and the recoveries, without exception, have been safe and speedy. The operations of late years had, for some reason or other, increased in Boston, and he had now on an average about three in the course of the year, operations for stone being also done by other surgeons, whereas fifteen years ago the whole number of cases done in Boston did not amount to more than three in two years. As regards the chemical character of the stones, the greater part were composed of uric acid; next to this comes the triple phosphate of magnesia and ammonia, and he had met with one case of "cystic oxide."

As to the operation of lithotrity, he considered it a perfectly safe one, if done with discrimination and with proper delicacy of manipulation; he had often done it at his own house without more inconvenience to the patient than in an ordinary case of catheterism. Care should be always taken not to move the instrument too much about in the bladder for the purpose of exploration. By sinking the beak of the lithotrite into the fundus of the bladder, opening it, and giving it a slight vibratory motion, the stone will generally fall between its jaws. It should then be raised to the middle of the cavity of the bladder, to make sure that the mucous membrane is not engaged, and the stone crushed by turning the handle. This operation may be once or twice repeated, but no more than five minutes should be occupied by the whole operation. The fragments are very apt not to come away before the third day, the bladder apparently not immediately regaining its full power for the expulsion of its contents. Generally speaking, he had not operated oftener than once a week, but in some few cases, where there has been but little irritability, it may be possible to operate twice in the same period. In 1849, Dr. W. had published a paper in the *American Journal of the Medical Sciences*, on the advantages of the use of ether in crushing operations; previous to that time it had been thought unsafe to manœuvre the lithotrite in the bladder without the warning given by the sensations of the patient, for fear of involving the mucous membrane in the jaws of the instrument. In some cases, however, it was found that the bladder was so irritable as to render it impossible to work the instrument until the patient had been etherized, and in others concealed calculi which had been firmly grasped by the coats of the bladder were completely unmasked by the relaxation caused by the use of this agent. Civiale, it is understood, for some reason or other, objects to the use of anæsthetics. It is a remarkable fact that these patients require very large doses of ether to bring them sufficiently under its influence to annul the contraction of the bladder, and render the operation easy.

PUERPERAL ENTERITIS.

[Read before the Boston Society for Medical Observation, Feb. 1st, 1884, and communicated for the Boston Medical and Surgical Journal.]

BY S. H. CARNEY, M.D., BOSTON.

ROKITANSKY speaks of puerperal inflammations as always commencing in the "shape of an exudative process affecting that portion of the uterus to which the placenta had been attached," and that "metro-phlebitis supervenes upon, and is induced by the exudative process." "Uterine phlebitis is generally," he says, "a primary affection originating in the open mouths of the veins at the insertion of the placenta, and caused as well by their laceration as by contact with the external atmosphere, with the traumatic secretion of the part and with the product of exudation on the internal surface of the uterus."

Should pus be formed and be absorbed into the circulation, a train of symptoms follows, many of them destructive to life in themselves, unless relieved by nature or art.

Puerperal enteritis is frequently met with, occurring a short time before confinement and often inducing it, but is rarely seen after as the prominent symptom of puerperal fever. Few authors have deemed it of sufficient importance to make any extended remarks upon it; indeed, by far the largest number omit to notice it as one form of puerperal fever. That it is unaccompanied with peritonitis, I am unable to say, but am inclined to think that should the uterine inflammation not be very deep and not extend through the Fallopian tubes, the peritoneum might escape, and still the whole system be affected by the absorption of purulent matter formed in the uterine veins, and finally be eliminated by the mucous membrane of the intestinal canal. It does not seem probable to me that that form of puerperal enteritis coming on previous to confinement is the result of purulent infection, but that it is the result of congestion of the intestinal vessels, either caused by the pressure of the gravid uterus or by the irritation produced by an accumulation of impacted feces; the latter cause, produced by the former, is undoubtedly the more important, especially when we consider how frequent constipation is towards the end of pregnancy.

Puerperal enteritis occurring after delivery may have for its primary cause the same condition of the intestines that is noticed previously, or it may be the result of an attempt on the part of nature to throw off the *materies morbi* from the system. It is by far the more serious affection, as it indicates purulent absorption from an inflamed uterus.

Ramsbotham, Churchill, Gooch, Meigs, Bedford, make no mention of either affection. In *Braithwaite's Retrospect*, part viii., p. 166, it is mentioned that Dr. Oke reports two cases of puerperal diarrhoea treated successfully by acetate of lead and opium, but does not indicate which form of the disease he met with. Dr. R. U. West, in

a book entitled "Illustrations of Puerperal Diseases," gives the history of 78 cases under the head of puerperal fevers, in which diarrhœa was a more or less prominent symptom in 22 cases; and of 23 cases under the head of non-febrile diseases, in which diarrhœa occurred but in one. In his remarks upon one case, in which peritonitis appeared six weeks before delivery and diarrhœa supervened immediately after, he says, "The substitution of diarrhœa for peritonitis after the labor, I consider a remarkable fact. The puerperal disease in the case was diarrhœa, and yet we have been taught to regard peritonitis, for which the diarrhœa was substituted, as the *beau idéal* of puerperal fever."

The case which I now present is one of interest, inasmuch as the disease was undoubtedly puerperal fever, the mucous membrane of the intestines being the seat of the disease, and the part from which subsequently the morbid products of the blood were thrown off. It also shows the danger likely to result to a woman in labor who is attended by an ignorant midwife or nurse, from too early exposure to atmospheric changes and from fatigue. If such an accident should happen as the retention of the placenta, the danger is greatly augmented. I think the majority of cases of puerperal fever are due to the carelessness of nurses and attendants and their great anxiety to have their patients make a quick recovery. In the present case, the primary cause of this patient's illness was owing to exposure and fatigue so soon after delivery. It is also certain that her disease was very soon aggravated by the decomposition of the retained mass of placenta and the purulent absorption that took place.

The importance of examining the placenta in every case of labor, to see if any portion has become detached, is also suggested. I have had two cases where a small part was retained, and then removed, although the mass was expelled by the uterine and vaginal contractions alone.

Several months since, I was called to see Mrs. R., who had two weeks previously been delivered of twins under the care of a midwife. Her labor, which was the second one, was easy and of short duration, so I was informed. An hour or two after delivery, which took place at night, the woman in attendance had her get up into a chair while the soiled clothes were removed and the bed changed. Soon after returning to bed, she was seized with a chill which lasted an hour or more, after which she became comparatively easy. In the morning was quite feverish—had quite a profuse diarrhœa, which was pronounced "all right." In order that she might recover her strength sufficiently to suit her nurse, she was advised to sit up during the day. She was in the chair about two hours, during which time her hair was dressed and clothes changed. The next day, becoming more feverish, and the diarrhœa increasing, her husband called a physician, although earnestly urged by the midwife not to "get frightened," as all would "turn out well." The physician attend-

ed her during the next week, when I took charge of the case. She had taken chalk mixture and laudanum several times each day. At my first visit, I found her very pale; lying on back; countenance anxious; pulse 140; skin hot and dry; tongue dry, swollen, cracked and bleeding when touched; sordes on teeth. She complained of pain in the abdomen, with frequent desire to go to stool. No tenesmus. Abdomen not distended, but soft. Deep pressure, though gentle, produced pain. I was informed by her mother that she had had from twenty to thirty discharges in the twenty-four hours. Evacuations dark colored and very offensive. No blood. Urine scanty and high colored. The following was directed to be given every two hours:—*R.* Plumbi subacet., gr. i.; pulv. opii, gr. ½. *M.* Also an enema of starch (℥ i.) and tincture of opium (gtt. xxx.) after every second dejection. Fomentations to abdomen. Owing to the irritability of the stomach, which rejected almost everything, I advised the use of milk and lime-water, equal parts, which relieved the nausea and vomiting, and also refreshed her. On the second day, diarrhœa still continuing profuse, although somewhat diminished, and the patient quite exhausted, not only from the discharges but from sleeplessness, I directed pills to be given every hour, and to take as much port wine as she could bear. In the evening, reports, "feels better." One dejection since morning. Pulse 104.

The next (3d) morning, I found her much worse. Dejections had increased in quantity and frequency. Pulse 128. Lochia still continue; noticed as offensive. Omitted pills, and directed her to take one drachm of the following mixture after every second operation. *R.* Muc. acaciæ, ℥ i.; acidi gallici, ℥ ii.; morph. sulphatis, gr. ii. *M.* Was comfortable at night.

The next day (4th), pulse 108; one dejection in last twenty-four hours.

On the 5th day, directed enema to be given after every dejection. In the evening, report was that she had slept much during the day, and had had seven dejections.

6th day.—Dejections more solid; pulse 120; more sordes on teeth.

7th day.—Two small dejections, quite solid; tongue quite moist, but still without fur or papillæ.

8th day.—No dejection. Omitted medicine.

9th day, the 23d since her confinement, expelled a portion of placenta, about 1½ by 2½ inches. Had two slight dejections this day.

From this time the diarrhœa ceased to be troublesome or difficult to control.

10th day.—Complained of pain in right infra-maxillary region, attended, in a few hours, by swelling of parotid of that side. In the course of twelve hours the gland had enlarged enormously, rendering it extremely painful to swallow. Patient very feeble. Pulse 136. Directed her to have one grain of sulphate of quinine three times a

day, with increase of stimulant. In five days a large quantity of pus was discharged, the abscess having opened into the meatus auditorius.

24th day.—A mammary abscess, which she had not known to exist, was broken by her laying her hand quite heavily upon her breast. The very fetid odor of the discharge first called her attention to it. For several days had been very feeble, and was annoyed by vomiting, which occurred at a certain hour each day, whether food had been taken or not. This symptom was so distressing and persistent as to cause much anxiety as to her recovery. The following was used with marked relief:—*R.* Pulv. colom bæ, gr. vi.; ferri subcarb., gr. i. *M.* 3 t. d.

From this time she began to gain strength; both abscesses healed speedily, and in the course of a month she was fully restored to health. She is now perfectly well, and several months advanced in pregnancy.

ON THE ANTIPHLOGISTIC METHOD OF TREATMENT.

By HENEY VEALE, ASSISTANT SURGEON, ROYAL ARTILLERY.

(Concluded from p. 103.)

APART, however, from all theories as to the nature of inflammation, the practical question, "Whether the abstraction of blood in whole or in part opposes the process of inflammation," has yet to be considered. The advocates of the practice assert that nearly all the medical authorities, from the earliest times until the present, have treated acute inflammation by such means, and have approved of doing so; and this answer would seem almost sufficient to place the matter beyond a doubt; for it is not likely that the medical practitioners of all ages and of all countries should have been mistaken in supposing that bleeding afforded relief to their patients when suffering from acute inflammation. It is still less likely that those who have had experience of the remedy in their own persons should have been deceived as to the nature of their own sensations. In face of all the evidence on this point, I think it is impossible to deny that inflammation may sometimes be cured by bleeding. The theories that have prevailed at different times concerning its mode of action may have been erroneous, but the fact remains, and has yet to be explained.

That the curative effect of the remedy is not attributable to the removal of the corpuscular elements of the blood, nor of the fibrine, nor of its other constituents taken separately, has been sufficiently proved by the researches of Andral and Gavaret, Becquerel and Rodier, by Todd, Bennett, and others; and we are therefore led to inquire, whether the effect is attributable to the loss of blood *per se*, or whether there may not be some other element in the case which

requires to be taken into consideration. Before entering directly upon this inquiry, however, I must beg to make a brief digression.

A riddle always appears a wonderfully simple thing when its solution has once been learnt, and so does any mystery of nature seem to be *after* it has been interpreted to us. What is there, for instance, more easily intelligible now than the law of gravitation, or than that of the correlation of forces? What more simple than the leaf-theory of Goethe, or more obvious than the circulation of the blood? And yet, for ages upon ages, men remained in ignorance concerning these matters, although constantly endeavoring to discover the truth. Now that we have learnt to admit that nature and not the physician cures disease as a general rule, we have devoted ourselves with more assiduity to the observation of her processes; and we are gradually coming to the belief that, for the cure of the vast majority of our ailments, we have only to allow nature to work without impediment. At first sight this may seem a very easy task to perform, but it is not so in practice, because infinitely more skill and more accurate observation are required *not* to interfere with the curative efforts of nature than to become proficient in all the complications of any system ever yet propounded by man. We are only just now beginning, after centuries of distrust, to believe that nature's plan for the treatment of inflammations is generally the best, and that if we second her efforts in an intelligent manner, we adopt the safest course for our patients.

It frequently happens that we may see a law or a plan of nature more clearly manifested in the actions of the inferior animals than in those of man himself. It would almost appear as if the instinct of self-preservation were more forcibly developed in them than in ourselves. With all our "boasted civilization," and all our recent progress in sanitary science, we cannot yet place ourselves on an equality in hygienic matters with our horses, our dogs, or our cats. These, like all other animals, are liable to inflammation, which we may observe in its simplest form when it occurs as the result of external injury; and what is it we find that nature prompts an animal to do when it has sustained a serious hurt which inflammation must follow? In the first place, it withdraws itself from the society of its fellows; it gives itself absolute repose both of the injured part and of the whole body; it abstains from food, but not often from drink; and if the wound be accessible, it licks the part constantly with its tongue. Observe the extreme care shown by dogs of the greatest pluck, dogs that have seemed almost insensible to pain whilst engaged in fighting—observe the care they take afterwards not to move or to use the injured and inflamed limb, and then mark the wonderful rapidity with which their wounds heal. There is no depletion in these cases; there is nothing but the absolute rest which their seclusion, in whatever lair they may have found, gives to their nervous, muscular, and nutritive functions, as well as to the

part itself. Probably, if man were to obey his instinct only when he had sustained a serious injury, he would act in a somewhat similar manner; but the solicitude of his friends and neighbors, and eventually his own excitable thinking faculty, are generally more than sufficient to overrule his instinct.

When once we have obtained a clear conception of the work we ought to do, we have already advanced a long way towards its accomplishment. The removal of the obstacles that intercepted our mental vision renders the task comparatively easy. As soon as we understand that our object in the treatment of acute inflammations should be not to exert a "sedative influence on the heart and arteries," not to render the blood less plastic—"less stimulating," as the phrase went, not "to cut off the supply of blood from the inflamed part," not to "empty its gorged capillaries," nor even to make way for the speedier operations of our mercurials and antimonials and cathartics, but simply to imitate nature's method, and suspend the functional activity of the oppressed part, then the means of doing so increase exactly in proportion to our knowledge of what its functions are. This would seem to be the true rational medicine, having its basis on a correct interpretation of nature's mysteries: in other words, on physiological science.

In the management of any acute inflammatory disease, from the smallest boil to the gravest inflammation of the heart, the lungs, or the brain, we find that nature is consistent in her plan. For all she prescribes *rest*, which she varies only in degree. The loss of appetite which so constantly attends acute inflammation, and which has often been supposed to be an indication for depletion held out by nature herself, I think we ought to regard as the strongest manifestation that she requires rest for a time, even from the task of converting food into blood. The danger to life would seem to be so great in such cases, that all her *disposable* forces, all her *vis in esse*, are summoned into the citadel, as it were, to guard it from the enemy who is seeking to obtain an entrance there. By and by, when she shall have gathered up all her *radical* strength, all her *vis in posse*, and the enemy shall have been thereby overcome, she will not fail to occupy her outposts again. The *pain* of inflammation is also to be considered as a signal for rest. Pain seems to be the means which nature employs in order to enforce the suspension of functional activity in an inflamed part; and the circumstance is sufficiently remarkable, that the pain of inflammation is generally most severe in those parts where rest is most easily obtainable. There is not much pain, for instance, in pure bronchitis or in pure pneumonia, and we know that the action of the lungs cannot be arrested for more than a very brief period without death as the result; but in pleurisy there is often intense pain, and the parts concerned in this case do admit of their functional activity being diminished. An inflamed joint, an inflamed bone, an inflamed finger, or an inflamed eye, are

all intensely painful, and pain in all these cases leads to functional rest; but an inflamed liver, an inflamed kidney, and notably an inflamed heart, are not very painful, and in them we find that pain would not obtain rest. The pain of peritonitis and enteritis, again, does necessitate rest, and inasmuch as it does so, it serves a useful purpose; but then in treatment we must remember that "pain kills," it exhausts the vital force; and therefore our object should be to assuage it certainly, but to do so in such a way that the functional activity of the oppressed part may still be kept in abeyance. Opiates answer this twofold purpose, but it is necessary that they should be given in much larger doses than are usually employed. In the treatment of injuries sustained on the battlefield especially, I can assert, from a sufficient experience, that their employment in this way is absolutely indispensable.

Returning now from this digression, we may resume the inquiry, whether the beneficial results of bloodletting are produced directly or indirectly; whether, in fact, it is the loss of blood that affords relief, or whether loss of blood is only a means of developing the conditions for obtaining it.

This question is by no means so easily answered as might at first be supposed; because, in almost all instances where depletion is effected, rest of the inflamed part, *i. e.*, a suspension of its functional activity, more or less complete, is also obtained. If it were possible for active depletion to be made without enforcing thereby a greater or less degree of this suspension of functional activity, the crucial test could easily be applied; but this not being so, we can only reason from probabilities. That the actual abstraction of blood is not essential may be inferred from the case reported by Dr. M. Solon, and quoted by Dr. Watson, of erysipelas cured by a succession of fainting fits, without the loss of a single drop of that fluid; and I think it may be safely asserted, on the other hand, that loss of blood, without a suspension of functional activity in the part, would prove of little value. Let a man have a traumatic inflammation of the integument of his arm, for example, and let him, through sheer force of his will, continue to use the limb, and thereby to enforce the functional activity of the inflamed area, and I think it will be generally admitted that no depletion which did not necessitate rest would cause the inflammation to subside. Then, again, all observers agree in stating that bleeding, to prove effectual in the cure of inflammation, depends more upon the manner in which it is effected than on the absolute quantity of blood taken away. The blood was to be drawn *pleno rivo*, the patient being in an erect or sitting posture. As Dr. Watson says, "If you neglect these small matters, and make an insignificant slit in the vein, and suffer your patient to lie down whilst you are bleeding him, you will be obliged to take much more blood in the end; or you may drain him of his

blood and of strength by repeated bleedings of this sort, and make no impression after all on the disease."

I have already expressed myself ready to believe the statements of the older physicians, as to the relief which bleeding sometimes afforded, and I see no reason to suppose that similar results might not be obtained in the present day. There is no necessity to deny the facts as some have done, or to attempt to explain them away as others have sought to do, if we admit that loss of blood causes a diminution or suspension of the functional activity of an inflamed part; and that it is capable of effecting either may, I think, be easily proved. "You see a person," says Mr. Lawrence, "with his eye bright red and very painful; he cannot face the light, and tears gush out with great suffering if he attempt to do so. You bleed to fainting, and immediately the capillaries are emptied, so that the organ resumes its natural paleness; the pain is gone, the eye is opened without difficulty, and the full influx of light can be borne without an uneasy sensation. For a time the part has passed from inflammation to a nearly natural state." But notwithstanding this relief the inflammation is probably far from being cured, for all the symptoms are only too likely to recur as soon as the circulation is restored. The rest afforded by the bleeding has not lasted long enough to allow of the nutritive activity recovering its proper balance. In some cases, it might happen that a single bleeding would give a sufficient rest to admit of recovery taking place; but in the majority it would be necessary to repeat the venesection; and oftentimes, according to the old expression, such a repetition would either "*kill or cure*." Therein lay the danger, and the question arises, Does bleeding afford the best means of obtaining the rest that is required? Formerly it may have been, and probably was, the best, because it was the only one known; but now-a-days the case is altered. Knowing what we now know of the inflammatory process, knowing that it requires a well-conditioned blood for its satisfactory evolution, and that "the excitement of the circulatory system, the rapid and bounding pulse," "the redness, the swelling, and the heightened sensibility"—all betoken diminished and not increased vital power; knowing all this, must we not ask ourselves, whether in abstracting not only so much by weight of the circulating fluid—the "liquid flesh," as it has been called, but the richest and most highly elaborated part of it—we are not paying too high a price for the benefit we expect to receive? Granting that we find it absolutely necessary to give rest to the laboring heart, lung, or liver, have we no other means of doing so than the abstraction of the *pabulum vite* itself?

The answer must now be made in the affirmative; for we have not only means as certain, but even more effectual and infinitely safer. Their action may not be so speedy, but they are less costly;

and "slow but sure" is a quality far preferable in this case to the brilliant but uncertain.

Let us now consider and contrast the two methods of treating a case of acute inflammation—of simple pneumonia, for example.

According to the ancient method the means employed were—

1st, *Bleeding*: the effects of which were a temporary rest or suspension of functional activity, both of the inflamed part and more or less of the whole body, but at the same time, a deterioration of the blood and a diminution of the vital power, which the occurrence of the inflammation had of itself shown to be already seriously impaired.

2d, *The administration of mercury*: which still further impoverished the blood, and thereby depressed the vital power, without any compensation whatever in the way of rest.

3d, *The use of antimonials*: these afforded rest, but only at the cost of producing nausea and depressing the vital power. When given as sudorifics they perhaps acted more beneficially, as we shall see in the sequel; but they were very rarely indeed prescribed with this object only.

4th, *Purging*: this, according to the extent to which it was carried, impaired the quality of the blood, lowered the powers of life, and over-exerted the body, instead of affording rest to it. It must, however, be stated, in justice to our immediate predecessors, that they had themselves recognized, if not the injurious effects, at least the inutility of purgation as a curative means.

5th, *Prolonged abstinence from all kinds of nutritive food or stimuli*—a measure that necessitated rest truly, but at the same time compelled the body to live on itself, as it were, and thereby maintained and tended to increase the depression of the vital powers.

6th, *Local depletion*, by cupping and leeching, producing effects differing only in degree from those of general depletion.

7th, *Counter irritation*, by blisters and rubefacients, sometimes perhaps proving beneficial, but generally quite inadequate to change the action of an acutely inflamed part; and in such cases becoming hurtful, by deteriorating the quality of the blood, and by exhausting the nervous system through pain.

There can be no reason to doubt that this method of treating inflammation was often enough successful, when carefully employed, to justify the belief that even recourse to it was better than no treatment at all; and there is every probability, I think, that if still adopted the results would be the same; but there is this source of danger inherent in the whole system, that its tendency is to diminish the powers of life, and to *kill* if it does not *cure*. Such a reflection should make us pause ere we sanction the use of such deadly two-edged weapons. Very few persons, indeed, could wield them with the nicety and dexterity necessary to do good; whilst the majority of

us would be almost sure to strike beyond the mark, and to do harm instead.

Happily, a safer and more rational treatment is gradually but steadily gaining ground; but, in order to understand its application in any given case, we have first to determine what the functions are to which we propose to give rest.

Now the chief offices of the lungs are—1st, To supply oxygen to the blood; 2d, To remove carbonic acid from it; 3d, To exhale watery vapor more or less charged with animal matter.

The demand for oxygen and the quantity of carbonic acid requiring to be exhaled bear a direct proportion (a) to the degree of nutritive and formative activity in the tissues generally, (b) to the amount of functional activity of the nervous and muscular systems especially, and (c) to the greater or less necessity for maintaining the heat of the body by the internal combustion of carbon and hydrogen. Consequently, if we could "fix the state of nutrition," or retard the process of decomposition in the body, suspend all its nervous and muscular actions, and render unnecessary the maintenance of its heat by the process of internal combustion, we should give the lungs absolute rest, and place them in the conditions most favorable for recovery when inflamed; but unfortunately we have no certainty of being able to arrest the process of nutrition, without producing an injurious effect on the vital powers. So long as life remains, this process must be carried on; and as the presence of oxygen is indispensable for its performance, and as this gas enters the body almost entirely through the lungs, absolute rest of these organs during life is impossible. Still, to whatever extent we can succeed in reducing the consumption of oxygen in the body, to the same degree we can suspend their functional activity; and as a general rule it may be affirmed, that the causes which bring about a diminished elimination of carbonic acid are a measure of those which render a smaller supply of oxygen necessary. The effect of a high temperature of the air in reducing the functional activity of the lungs may be presumed from the immunity from pulmonary diseases enjoyed by the inhabitants of tropical countries; and its influence in diminishing the exhalation of carbonic acid has been shown by Vierordt to be so great, that between 38° F. and 75° F. the human subject experiences for every rise of 10° F. a decrease of two cubic inches per minute in the quantity exhaled. A dry state of the atmosphere also seems to cause a diminution in the rate of exhalation of carbonic acid. Thus Lehmann has shown, that "while one thousand grammes' weight of rabbits exhaled in *dry* air 0.451 gramme per hour at a temperature of 100°, they exhaled as much as 0.677 in a *moist* atmosphere at the same temperature."

Absolute repose of the muscular and nervous systems, sleep, abstinence from solid animal or farinaceous food, and, contrary to

what might have been expected, the use of alcoholic drinks under certain circumstances, also diminish the exhalation of carbonic acid; whilst their opposites, viz., exercise, either of the mind or body, want of sleep, a diet of animal or farinaceous substances, &c., tend to increase it. Again, it is a well-ascertained fact, that the lungs, and the skin especially, are able to supplement each other to a considerable degree: and that the kidneys, the liver, and the intestinal canal, are also capable, more or less, of performing the functions which, under normal conditions, are performed almost solely by the lungs; and it is reasonable to suppose that the more active these organs are within certain limits, the less must be the amount of work required to be performed by the lungs.

Keeping in view, then, the two principles here indicated, viz., the reduction of the special function of the lungs to the lowest point compatible with the performance of the processes of life, and the substitution, as far as possible, of its subordinate functions by an increased activity of the skin, the liver, the kidneys, and the intestinal tract, we may, by the adoption of these two plans, and by their judicious combination, succeed in giving to an inflamed lung that amount of rest which is necessary for the process of recovery. Indeed, the fact is indisputable, that by this method, properly carried out, we actually do succeed in rendering pneumonia a much less fatal disease than it used to be when phlebotomy and a general depletion were the measures commonly resorted to, or than it is even now found to be when treated by such means.

The correct treatment of acute inflammation of the lungs, then, consists in maintaining:—

1st, *A uniformly high temperature in the ward or sickroom (say from 70° F. to 80° F.), and as dry and pure a state of the atmosphere as possible.*

2d, *Absolute rest of mind and body*—to ensure which the administration of narcotics and anodynes in large doses will often be found necessary.

3d, *Abstinence from animal and farinaceous food.*

4th, *The ingestion of cooling drinks*, saline or acidulous, according to the case and the desire of the patient.

5th, *The use of remedies that tend to increase the functional activity of the skin, kidneys, liver and bowels*—for which purpose the acetate of ammonia will generally prove sufficient, but a cholagogue cathartic may occasionally be required in addition, if the tendency to constipation be greater than usual.

6th, *At no very long period after the establishment of the disease, two or three days at most, the use of wine*, at first diluted and in small quantities, but increased both in strength and amount as the disease progresses.

7th, *A careful watching for the first signs of returning appetite*, when the sensations of the patient will best indicate the kind of

food that will be most suitable. Most frequently the desire is first for soup, milk, or jelly; and shortly after this stage he will be able to eat, and will be the better for eating, animal food itself.

It is almost impossible to over-estimate the importance of maintaining the atmosphere dry and pure, but especially at a *uniformly* high temperature. Attention to this point should never be omitted. By night, and all night as well as during the day, a bright clear fire should be kept constantly burning in the ward when acute inflammation of the thoracic organs has to be treated. It is far safer to rely on this measure alone, in such cases, than to employ any of the drugs contained in the whole pharmacopœia, but it is to be feared that the excessive zeal of our would-be sanitary reformers is often only too successful in frustrating it. How constantly may we observe, during the winter, patients affected with inflammation of one or other of the thoracic organs exposed to a temperature of 50° F. at best by day, and to one as low as 30° F. or 40° F. by night! It is not in country districts alone, or in the miserable garrets of the poor, that such things are to be seen. Foul air unquestionably is only another name for slow poison, but it is probable that very cold air produces effects quite as injurious on the sick and the sleeping. Nor should we ever relax our vigilance in maintaining absolute repose of the mind in all dangerous and acute inflammations. In this respect the human subject should be reduced as nearly as possible to the condition of the brute creation; nay, even to that of the simply organic or vegetative, as distinguished from animal existence. It is needless, however, to say that this would be wholly incompatible with the plan of treatment which we have seen reason to condemn. What with leeching, cupping, blistering, purging, nauseating, salivating, and the like, which constituted the orthodox treatment of our ancestors, and perhaps is even still practised somewhat too often, how was it, or is it, possible for the nervous or even the muscular system to obtain repose?

On the other hand, it must be confessed that the rational method often fails to impress the *profanum vulgus* with the belief that sufficient is being done. "Do you call *that* treatment?" said an elderly medical man once in the ward of an hospital where it was attempted to be carried out. "According to my opinion," he added, "that is no treatment at all." And to those who happen to be profoundly ignorant of physiological and pathological science, it certainly has not the striking effect which is produced by a copious bleeding, *coup sur coup*, by a constant retching, by a violent purging, or by a profuse salivation. It is even doubtful whether it gives to the patient himself that degree of confidence in his doctor which the sudden and marked, though temporary and fallacious relief of a copious bleeding so frequently affords. Whatever vividly impresses the imagination of the patient or the bystanders, even though it cause intense suffering, is pretty certain to receive credit for a large share in the cure.

The popular mind puts immense faith in cupping and blistering, for instance: such measures satisfy it that "something is being done" at any rate; and as the popular mind is generally very ignorant, and believes without reasoning, charlatans make use of their knowledge of this weakness for the furtherance of their own low designs. Charlatans deserve punishment; but no reproach can be too severe, no contempt too profound, for the conduct of those who, without being charlatans, endeavor to prostitute to base purposes the means which science has consecrated to the alleviation of human suffering.

I have dwelt at the greater length upon the treatment of acute pneumonia, because it was necessary to illustrate by an example the principle which I have sought to display and to enforce; but it would be obviously impossible within the limits of this paper to show its application to the treatment of all the acute phlegmasiæ. Such a task would almost necessitate the compilation of a treatise on the whole science of physiology and pathology. Sufficient, however, has been said, I trust, to justify the following conclusions:—

1st, That, according to the present state of our knowledge, the natural and proper method of treating acute inflammation consists in diminishing or suspending the functional activity of the affected part.

2d, That depletive measures only prove beneficial in proportion to the extent in which they fulfil this indication; that the employment of them is extremely hazardous, besides being unnecessary; and that their curative effects are always uncertain.

3d, That the means to be adopted for the treatment of acute inflammation, although always the same in principle, should be varied according to the functions of the parts concerned.—*Edinburgh Medical Journal*.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 10, 1864.

TREATMENT IN POISONING BY OPIUM.—The remarks of a correspondent in last week's JOURNAL, on the common methods of treatment in cases of poisoning by opium, together with his strictures on the course pursued in a case recently reported by Dr. J. G. Blake, call for some comment from us, which want of space did not allow us to make at that time. There is no doubt much that is wise and judicious in the suggestions of Dr. Daniels, but we cannot accept all his conclusions or unequivocally endorse his methods.

Speaking of Dr. Blake's patient, Dr. Daniels says, that when Dr. Blake was called to the man the "influence" of the laudanum "as a stimulant had entirely passed by, and the patient was in a state of genuine debility;" and he asks, "Is this a state in which the pros-

trating influence of an emetic is desirable, provided the medicine will act as such?" Without stopping to discuss the propriety of the use of this word "debility" in this connection, we answer that in our opinion it was. That the patient was not entirely narcotized appears from the fact that by shaking he could be aroused so as to mutter a few words and attempt to shake off Dr. Blake's hands or push him away. The patient was a large man, very probably used to stimulants, and therefore to some extent protected from the narcotic influence of the drug he had taken. What harm, then, from the administration of an emetic powerful enough to overcome the insensibility of the stomach and compel it to reject its fatal load? The result, we are told, after a repetition of what we should not regard as a violent emetic, was "tolerably free vomiting, emptying the stomach completely." Now we do not believe the patient sustained the least injury from this. We believe that up to the point of vomiting any amount of emetics may be given in such cases with perfect impunity. Up to that point the power of the emetic is obviously annulled by the opiate; so that whatever (if any) depressing effect may result, is due to the overplus of the emetic, which, when administered as in the present instance, must have been a very small quantity, and that of so innocent a drug as ipecac. Certainly very few physicians will believe that this was of any very serious weight in the present instance. Even if there had been an obvious risk in employing the remedy, the case was urgent enough to justify it. In extinguishing a fire in a warehouse it will not do to refrain from throwing on water for fear of wetting the goods.

The next point in the treatment was the forced exercise. As we have known this to answer a good purpose and it is generally recognized as an approved method of treatment, Dr. Blake was certainly authorized in employing it. It is possible that in the present instance the exercise may have been excessive, considering the temperature (85° in the shade) under which it had to be used. At any rate, we should have preferred other methods of arousing consciousness, less exhausting, perhaps, which would have allowed the patient a more passive position, such as the use of the battery or of artificial respiration. Dr. Blake, however, failed to obtain a galvanic battery, and adopted the plan of involuntary exercise as the best substitute for it. Finally, it appears that the patient was sent to a public institution, where he had recovered so far as to walk almost without assistance when Dr. Blake left him. The stupor subsequently returning, a drachm of Thayer's fluid extract of belladonna was given, and was subsequently repeated. The patient was partially relieved, but gradually sank away and died about twenty-one hours after taking the laudanum. Now it is not easy to say in the present instance what agent was the precise and special cause of death. Dr. Daniels in his criticism has entirely overlooked the two drachms of extract of belladonna, a preparation the ordinary dose of which is from five to ten drops, and which, given as an antidote, could not in power have fallen far short of the original opiate. Some consideration also should be given to the depressing effect of the extreme temperature, which must have had a very important influence in lowering the vitality of the patient. In conclusion, we think we are justified in saying that the treatment employed by Dr. Blake was such as promised the most favorable results, and up to the last few hours of the patient's life seem-

ed to be fulfilling that promise. The great point of keeping the respiratory process up to the vital point was attained, and justified the belief that the whole economy could be kept in working order until the poison was wholly eliminated, and the danger had passed.

Having had experience of the prompt and most efficient working of the magneto-electric battery in exciting the respiratory process, in a patient who was quite insensible to ordinary modes of stimulation,* we have a decided preference for this agent, in treating cases of opium poisoning, and should always have recourse to it if possible, after evacuating the stomach. The stomach pump is not always at hand for the latter purpose, and we must confess we are not convinced we run much risk of injuring the patient by the judicious employment of emetics.

The case reported by Dr. Daniels in which recovery took place without resort to exercise, would seem to have been one of not very alarming character. The patient was let alone, being carefully watched, after the stomach was pumped out, and her respiration could not have fallen to a very low point during the continuance of the narcotism, or means would have been employed to raise it. It is evident, therefore, that she did not need the means condemned by Dr. Daniels and judged by Dr. Blake to be important in his case.

THE SAINT LOUIS MEDICAL JOURNAL, after an interval of three years' suspension, comes to us once more with renewed life. We hail its re-appearance with the most cordial welcome, as a harbinger of permanent peace and prosperity to the noble State from which it issues. The number for January and February contains much original and valuable matter; and the names of the eminent professional gentlemen, under whose auspices the Journal appears, are a sufficient guaranty that it will take a place in the foremost rank of American medical periodicals.

COMMENCEMENT OF THE NEW YORK OPHTHALMIC SCHOOL.—At the recent commencement of this institution, the graduating class numbered seventeen. Resolutions were adopted by the class expressive of sympathy with Dr. Mark Stephenson for his recent illness, and complimentary to Dr. Marcus P. Stephenson for his lectures as a substitute, and inviting him to repeat the course at the next session of the institution.

COLD APPLICATIONS TO THE THROAT.—To prove that this practice is not new, the Editor of the Canada *Lancet* quotes from the literature of the subject as far back as Mason Good, where we learn that as long ago as 1822 croup was treated with cold applications. The same has been recommended by various writers at different periods to the present time. The editor says that his own experience in the use of cold applications to the throat for croup is decidedly favorable; in no instance have they failed to produce a marked good effect on the breathing. He now constantly orders pieces of ice to be held in the mouth, and the cold water to be swallowed in all inflammatory affections of the throat.

The same number of the *Lancet* contains a letter from M. M. Taylor, Surgeon U.S.V., to Prof. N. S. Davis, of Chicago, in which the writer

* See a case of recovery from narcotism, reported in this JOURNAL, vol. XLVI., page 436.

states that for the last four or five years his practice has been to apply ice to the throat externally in the treatment of inflammatory and spasmodic croup, diphtheria, tonsillitis, laryngitis, œdema of the glottis, and, indeed, all inflammatory affections of the throat not connected with the eruptive fevers. It exerts a powerful sedative effect, both general and local, and though it may not arrest, it always modifies the morbid action. He says:—"My mode of application has been to secure a piece of ice, the size of a hen's egg, so shaped as to adapt itself to the form of the neck, upon each side of the larynx, or as near the seat of inflammation as practicable, and for tonsillitis immediately to the submaxillary region, upon one or both sides, as the case might require. I have generally adjusted the ice by enveloping it in a single thickness of oiled silk, so that it could not slip from its place, then, placing it saddlewise over the larynx, I next envelope the whole neck with several thicknesses of flannel, with the view of preventing the temperature of the surrounding air from contributing to any extent in dissolving it. When the ice seems to be no longer required, the moderate application of cold water will prevent too great reaction, and the lighting up anew of the morbid action." This treatment is not solely relied upon to the exclusion of other remedies, but is considered a valuable auxiliary to such other medication as the circumstances of any particular case seem to demand."—*Am. Med. Times.*

MASSACHUSETTS CHARITABLE EYE AND EAR INFIRMARY.—During the year ending Oct. 30th last, 3422 patients were treated—2859 for diseases of the eye, and 563 for diseases of the ear. The expenses were \$8075.83, including \$2525.28 for building a sea wall. The State appropriation was only \$1500, a reduction of \$1000 from former years, and this year in consequence of the increase of patients, many of them from the army, the Treasurer asks of the Legislature that the original sum of \$2500 may be appropriated.

VITAL STATISTICS OF BOSTON.
FOR THE WEEK ENDING SATURDAY, MARCH 6th, 1864.
DEATHS.

	Males.	Females.	Total.
Deaths during the week	54	52	106
Ave. mortality of corresponding weeks for ten years, 1853—1863,	41.1	39.7	80.8
Average corrected to increased population	00	00	88.60
Death of persons above 90	0	0	0

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Diphtheria.
23	2	5	11	2	1	0	3

MARRIED.—At Cambridge, 3d inst., Dr. George Derby, Surgeon of the 23d Reg't Mass. Volunteers, to Miss Elizabeth Parsons, daughter of the late Wm. Parsons, Esq., of this city.

DEATHS IN BOSTON for the week ending Saturday noon, March 5th, 106. Males, 54—Females, 52.—Apoplexy, 3—Inflammation of the bowels, 1—congestion of the brain, 3—disease of the brain, 2—Inflammation of the brain, 2—bronchitis, 2—cancer, 1—consumption, 23—convulsions, 4—croup, 2—diarrhoea, 1—diphtheria, 3—dropsy of the brain, 3—dysentery, 1—erysipelas, 3—exposure, 1—scarlet fever, 5—disease of the heart, 4—insanity, 1—intemperance, 1—laryngitis, 2—congestion of the lungs, 5—Inflammation of the lungs, 11—marasmus, 2—measles, 1—paralysis, 1—puerperal disease, 1—smallpox, 2—teething, 1—thrush, 1—tumor, 2—umbilical hemorrhage, 1—unknown, 8—whooping cough, 2.

Under 5 years of age, 39—between 5 and 20 years, 11—between 20 and 40 years, 21—between 40 and 60 years, 21—above 60 years, 14. Born in the United States, 75—Ireland, 22—other places, 9.